

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	)
Lawrence G. Rodriguez, et al.	) Group: 3673
Serial No.: 10/647,967	)
Filed: August 26, 2003	)
Title: TURN-BUTTON WITH LEADING HELICAL	)
END PORTION	) Examiner: C. Boswell

**REPLY BRIEF**

MS APPEAL BRIEF - PATENTS  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The present Reply Brief is in response to the Examiner's Answer, mailed November 24, 2009. The present Reply Brief is related to Appellant's appeal of the decision of the Examiner dated January 21, 2009, finally rejecting claims 1-6 and 8-21 (with claims 1-6 and 8-20 now pending).

Appellant's statements made in this Reply Brief are supplemental to Appellant's statements made in the Brief of Appellant, filed August 18, 2009, which are incorporated herein by reference. To the extent that a response is not provided in this Reply Brief to an Examiner's comment of the Examiner's Answer, Appellant stands by the statements made in the Brief of Appellant without further elaboration.

**I. TABLE OF CONTENTS**

II. Status of Claims .....	Page 3
III. Grounds of Rejection To Be Reviewed On Appeal.....	Page 4
IV. Argument.....	Page 5

## **II. STATUS OF CLAIMS**

Pending: 1-6 and 8-20.

Canceled: 7 and 21.

Allowed: None

Objected To: None

Rejected: 1-6 and 8-20.

Withdrawn from Consideration: None.

On Appeal: 1-6 and 8-20.

**III. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

A. Claims 1-6, 8-10, 12-16 and 18-21 were rejected under 35 U.S.C. § 102(e) as being anticipated by Liu (U.S. Patent No. 6,925,844).

B. Claims 11 and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (U.S. Patent No. 6,925,844) in view of Hurdle (U.S. Patent No. 842,834).

#### **IV. ARGUMENT**

##### **A. REPLY TO EXAMINER'S RESPONSE TO ARGUMENTS**

Appellant stands by the arguments set forth in the Brief of Appellant in relation to claims 1-6 and 8-20. In addition, Appellant provides the following reply to specific assertions made by the Examiner in the Response to Arguments at pages 5-10 of the Examiner's Answer.

##### **Reply to Examiner's Answer at Page 5, Paragraph 3-Page 6, Paragraph 1**

The Examiner's opening statement at page 5 of the Examiner's Answer is essentially a restatement of a portion of Appellant's claim 1. For convenience of the reader, claim 1 is reproduced in its entirety below.

1. A lockset, comprising:
  - a lock mechanism having an aperture;
  - an operator; and
  - a turn-button mounted in said operator during assembly of said lockset, said turn-button including:
    - a head portion; and
    - a shaft extending from said head portion, said shaft having a leading helical end portion that engages said aperture of said lock mechanism.

In the Examiner's Answer, the Examiner reminds Appellant that the Examiner must take the broadest reasonable interpretation in light of the specification. Appellant adds that one looks "to the specification to ascertain the meaning of a claim term as it is used by the inventor in the context of the entirety of his invention". *Comark Communications v. Harris Corp.*, 48 USPQ2d 1001, 1005, 156 F.3d 1182, 1187 (Fed. Cir. 1998). The context of the entirety of the invention may be made by reference to Appellant's specification and drawings. For the convenience of the reader, a portion of claim 1 is reproduced below, with reference to Appellant's specification, followed by Appellant's Figs. 1-3 of the present application.

Claim 1 recites in part, a turn-button (12) mounted in said operator (16) during assembly of said lockset (10), (page 1, lines 8-15; page 2, line 24) said turn-button (12) including: a head portion (20); (Page 2, lines 25-26; Figs. 1 and 2) and a shaft (22) extending from said head portion (20), (Page 2, lines 25-25; Figs. 1 and 2) said shaft (22) having a leading helical end portion (26) that engages said aperture (34) of said lock mechanism (14). (Page 2, lines 27-28; Page 3, lines 8-13; Figs. 1-3).

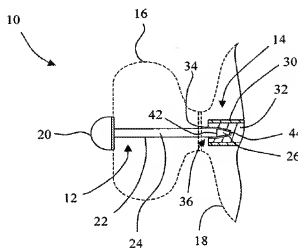


Fig. 1

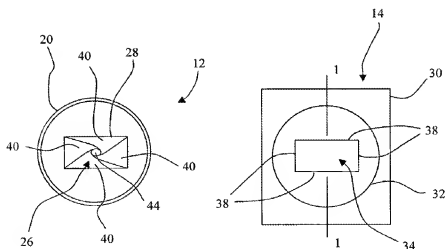


Fig. 2

Fig. 3

Also, for convenience of the reader, Figs. 1, 2B, and 3 of Liu are reproduced below for comparison purposes.

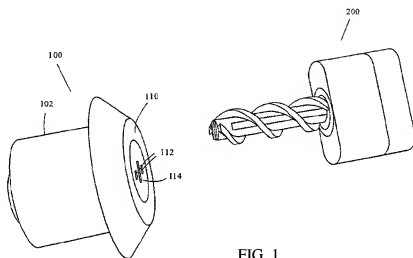


FIG. 1

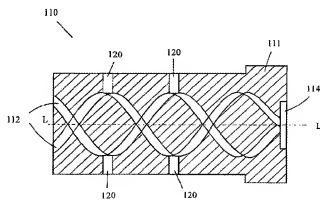


FIG. 2B

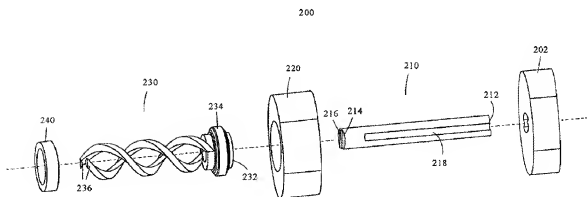


FIG. 3

The Examiner states that there is an absence of any definition as to what a turn-button further entails, and the Examiner concludes that that a turn-button entails “a component having a head portion and a shaft having a helical end portion that extends from the head portion and engages an aperture of a lock mechanism”. However, the Examiner’s analysis replaces the term “turn-button” with a more general term “component”, thereby avoiding the ordinary and accustomed meaning of the term “turn-button” as would be understood by one of ordinary skill in the art.

It is the general rule that the words in a claim are given their ordinary and accustomed meaning, unless it appears that the inventor used the words to mean something different than their ordinary and accustomed meaning. See *Johnson Worldwide Assoc., Inc. v. Zebco Corp.*, 175 F.3d 985, 989, 50 USPQ2d 1607, 1610 (Fed. Cir. 1999); *Renishaw PLC v. Marposs Societa Per Azioni*, 158 F.3d 1243, 1249, 48 USPQ2d 1117, 1121 (Fed. Cir. 1998); *York Prods., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572, 40 USPQ2d 1619, 1622 (Fed. Cir. 1996); *Haganas AB v. Dresser Industries, Inc.*, 9 F.3d 948, 28 U.S.P.Q.2d 1936 (Fed. Cir. 1993). In Appellant’s specification, no attempt is made to use the term turn-button to mean something different from its ordinary and accustomed meaning. It is respectfully submitted, however, that as stated in the grounds for the current rejection of Appellant’s claims, the Examiner has departed from the ordinary and accustomed meaning associated with “turn-button”.

As set forth in the Brief of Appellant at pages 14 and 15, Appellant explains that the terms “turn-button” and “turnpiece” are used interchangeably in the art, and Appellant lists six exemplary patents that show and describe a turn-button/turnpiece. Thus, the Examiner’s assertion that there is no recitation of the term “turnpiece” in the claims is irrelevant, since the



terms “turn-button” and “turnpiece” are synonymous in the art. Notwithstanding, the owners of these six exemplary patents are variously Kwikset, Emhart or Newfrey LLC, who constitute a market share of about 60%. Accordingly, there is an extensive use of the terms turn-button/turnpiece in the art to refer to this particular item used in a door handle assembly that is permanently mounted in an operator (e.g., door knob) to actuate a lock mechanism.

Also, the occupant(s) of most any house or apartment is/are familiar with the exterior function and characteristics of a “turn-button” in the interior locking of, for example, a bedroom or bathroom door by the turning of a turn-button, rather than by the insertion of a key into a key slot of a lock cylinder. Now, having established what a turn-button is, and what it is not (a key), the claimed invention is directed to structure to aid in the alignment of the shaft of the turn button with the aperture of the lock mechanism during assembly of the lockset. (See Appellant’s specification at page 1, lines 10-15).

Accordingly, it is clear that a turn-button is not a key that would be removably received in a keyway. Thus, the key 200 of Liu is not a turn-button, as recited in claim 1.

**Reply to Examiner’s Answer at Page 6, Paragraph 2**

In the Examiner’s Answer at page 6, paragraph 2, the Examiner asserts that the key of Liu is placed in a suitable support, i.e., the lock, and thus concludes that the key 200 of Liu satisfies the limitation of the “turn-button mounted in said operator during assembly of said lockset”. Again, the Examiner ignores the fundamental difference between turn-button and a key. Further, it is respectfully submitted that the Examiner’s conclusion that a key being removably inserted into a keyway satisfies the limitation of a “turn-button mounted in said operator during assembly of said lockset” is not consistent with the Examiner’s observation that a claim is interpretation in light of the specification. In addition, it is

respectfully submitted that one skilled in the art would not consider a key inserted into a keyway to be “mounted” to the operator (e.g., door knob).

**Reply to Examiner’s Answer at Page 6, Paragraph 3**

In the Examiner’s Answer at page 6, paragraph 3, the Examiner asserts that the limitation, “turn-button mounted in said operator during assembly of said lockset” is a “product by process type limitation”, and states that “accordingly, when the structure recited in the reference is substantially identical to that of the claims, claimed properties or their functions are presumed to be inherent (MPEP 2112.01). Thus, the structure of Liu is substantially identical to that of the claimed structure, and thus the claimed properties are inherent.”

As a first point, for reasons set forth above, the Liu key/keyway structure is not substantially identical to the turn-button limitation of claim 1.

As a second point, the “properties” of a turn-button mounted to an operator (e.g., a door knob) are vastly different from that of the Liu key/keyway structure, and thus the Liu key/keyway structure does not inherently possess the claimed properties of a “turn-button mounted in said operator during assembly of said lockset”.

As a third point, claim 1 is an apparatus claim defined in terms of structure, not a method claim, and is not a recitation of a process that results in a product. The term “during assembly of said lockset” was added to aid the Examiner in understanding the fundamental structural difference between a turn-button, and a key/keyway structure wherein a key is removably inserted into a keyway by a user. Notwithstanding, the full term “turn-button mounted in said operator during assembly of said lockset” is structural in nature by providing a limitation which excludes a key/keyway structure, i.e., wherein a key is

removably inserted into a keyway by the user. Thus, contrary to the Examiner's assertions, claim 1 is not a product-by-process claim, and the term "turn-button mounted in said operator during assembly of said lockset" is not a product-by-process limitation.

**Reply to Examiner's Answer at Page 7, Paragraph 1**

In the Examiner's Answer at page 7, paragraph 1, the Examiner asserts that "there is a lack of a recitation in the claims that the turn-button is attached permanently in the operator...." The permanent attachment is inherent as a result of the "turn-button" being mounted in the operator during assembly of the lockset", as is known in the art. Turn-buttons by their very nature are attached to the operator with no intention of their subsequent removal, which in part makes a turn-button the structure that it is, rather than a key. Anyone who has operated an interior bedroom or bathroom door having a turn-button understands the permanent attachment of the turn-button to the operator (e.g., door knob) since the turn-button cannot be removed without the dismantling or destruction of the operator, in contrast to a key/keyway structure wherein a key is freely inserted into and removed from the keyway of a lock cylinder.

**Reply to Examiner's Answer at Page 7, Paragraph 2**

In the Examiner's Answer at page 7, paragraph 2, the Examiner asserts that Appellant misconstrues the rejection, in that the Examiner used blade portion 230 of Liu in equating to that of the claimed shaft, and never referenced the recited shaft, or "shank", 210 of Liu in the previous rejection. The point of the statements in the Brief of Appellant at page 17, line 5-page 18, line 11, is to demonstrate how the Examiner has misconstrued the Liu reference, since Liu expressly discloses a shaft, or "shank" 210 that is separate from the key "blade portion" 230. Notwithstanding the clear disclosure in Liu in this regard, the

Examiner asserts that the blade portion 230 corresponds to the recited shaft. It is important to note, however, that in the structure of Liu the key blade portion 230 freely rotates within head 220, and thus key blade portion 230 does not convey a rotary driving force as would be associated with a shaft as understood by one skilled in art. (Liu column 6, lines 38-45). Thus, the helical blade portion 230 is not a shaft.

Further, the helical blade portion 230 of Liu is not a “shaft extending from said head portion, said shaft having a leading helical end portion that engages said aperture of said lock mechanism” as recited in claim 1, but rather is itself is a spiraling helix key blade in its entirety.

Further, it is important for future reference herein with respect to claim 9 to note that in Liu it is the protrusion 216 of shaft (shank) 210 that is used to aid in alignment of the helical key blades 230 with the keyways of the lock mechanism (Liu column 7, lines 19-27).

### **Reply to Examiner’s Answer at Page 7, Paragraph 3, Bridging to Page 8**

The Examiner’s Answer at page 7, paragraph 3, first sentence, is essentially a restatement of a portion of Appellant’s claim 2. For convenience of the reader, claim 2 is reproduced in its entirety below, with reference to Appellant’s specification.

2. The lockset (10) of claim 1, said leading helical end portion (26) having a plurality of leading helical surfaces (40) that taper and twist from a transition line (42) of said shaft (22) toward a tip end (44) of said shaft (22). (See Appellant’s specification at page 3, lines 3-5; Figs. 1 and 2 reproduced above).

The Examiner references Liu Fig. 6C in stating that the “helical surface of Liu tapers in a manner such that the gradual decrease is from the radially outermost edge of the helical surface to the center axis or transition line, where the helical surface forms a spiral shape that extends to the distal end of the shaft.” The only discussion of Fig. 6C in Liu is that

provided in Liu at column 6, lines 59-64, which merely states that the structure of key blade 236''' is "only one helical key blade . . . of a elongated rectangular cross section . . ." The Examiner agrees that the key blade 236''' is "only one", i.e., a single, key blade. (Examiner's Answer, page 8, paragraph 1, mid-page). For the convenience of the reader, the alternative configuration of Liu Fig. 6C is reproduced below.

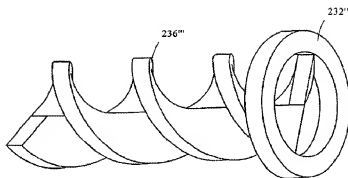


FIG. 6C

However, the structure shown in Fig. 6C is inoperable in relation to the disclosure.

As a first point, in accordance with the Liu invention, blade head 232''' rotates freely in the driver head 220 (see Liu Fig. 3 at page 7 of this Reply Brief; Liu, column 6, lines 41-45). Thus, the diagonal orientation of the blade head 232''' in relation to the asserted single helical blade 236''' would prohibit blade 236''' from rotating around the alleged central axis, as would be necessary to be functional in the context of the Liu disclosure (see Liu Fig. 1 at page 7 of this Reply Brief).

As a second point, when one attempts to follow the spiral path of key blade 236''' it is observed that the shape of the key blade 236''' cannot be formed as a single, i.e., "only

one”, helical blade, as described in the Liu specification, since the surface of the intermediate spiral does not tie in to the distal and proximal spirals.

As a third point, in connection with the first and second points made immediately above, the shape of the key blade 236” as a single key blade cannot function to follow a spiraling keyway, which is essential in the operation of the Liu device.

As such, without any clarifying discussion in the Liu specification, one skilled in the art would not utilize the design presented in Liu Fig. 6C in attempting to arrive at Appellant’s claimed invention. Further, due to the significant errors in the detail of the structure in Liu Fig. 6C outlined above, it is respectfully submitted that the Examiner’s reliance on Liu Fig. 6C yields an erroneous result.

Moreover, in the Examiner’s Answer at page 7, paragraph 3, the Examiner’s description of Liu Fig. 6C notes a “gradual decrease” of the helical surface from the radially outermost edge of the helical surface to the center axis with respect to Liu Fig. 6C. However, since the cross section of the structure of Liu Fig. 6C is rectangular (Liu column 6, lines 62-64), the tangents to the outermost edge toward the alleged central axis will all be equal, and due to the thickness dimension of the blade the side helical surface does not contact the central axis, which thus is not a transition line. Further, it is respectfully submitted that the skewed orientation of the inoperable embodiment shown in Liu Fig. 6C cannot be relied upon for any perceived structural features that the Examiner is attempting to find in relation to Appellant’s claims.

Notwithstanding, in claim 2 with reference to Appellant’s specification it is the “plurality of leading helical surfaces (40) that taper and twist from a transition line (42) of said shaft (22) toward a tip end (44) of said shaft”. In other words, it is the plurality of

leading helical surfaces, collectively, and not merely individually, that taper and twist from a transition line of the shaft, and as such forms the configuration shown in Appellant's Figs. 1 and 2 (reproduced above at page 6 of this Reply Brief). The Examiner's statements with respect to Liu Fig. 6C only apply to a spiraling surface as considered individually, and the spiraling surface itself does not taper and twist from the central axis, as asserted by the Examiner, due to the thickness of the blade.

### **Reply to Examiner's Answer at Page 8, Paragraph 1**

The Examiner's Answer at page 8, paragraph 1, first sentence, is essentially a restatement of a portion of Appellant's claim 3. For convenience of the reader, claim 3 is reproduced in its entirety below, with reference to Appellant's specification.

3. The lockset (10) of claim 2, wherein said plurality of leading helical surfaces (40) smoothly transition between adjacent helical surfaces (40). (Page 3, lines 5-7; Fig. 1).

As set forth above, the only clarifying language in Liu in relation to Fig 6C is that provided at column 6, lines 59-64, wherein it is stated that the structure of key blade 236''' is "only one helical key blade . . . of elongated rectangular cross section . . ." Since a rectangle has adjacent sides that intersect at 90 degrees, it is a fair reading of Liu Fig. 6C to say that the key blade 236''' does not have a plurality of leading helical surfaces that smoothly transition between adjacent helical surfaces. Further, Liu does not include any text that would remotely suggest the contrary. However, in Appellant's specification at page 3, lines 5-7, there is clarifying language that states that the "leading helical surfaces 40 may be smoothed so that leading helical surfaces 40 smoothly transition for one to another, i.e., smoothly transition between adjacent helical surfaces." (Emphasis added). Such simply is not the case with the structure shown and described in Liu.

**Reply to Examiner's Answer at Page 8, Paragraph 3 Bridging to Page 9**

The Examiner asserts that Appellant mischaracterizes the passage in Liu at column 7, lines 19-24, which Appellant has reproduced as follows as it appears in the published patent, “In an open-lock operation, the protrusion 216 of the key is firstly inserted into the positioning slot 114 provided in the center of the front end of the lock core 110 for positioning and facilitating insertion of the key (sic.) Each end of the helical key blade is then aligned with the entry of the keyway (sic.)”.

This is in relation to Appellant's claim 9, which recites in part, in relation to Appellant's specification:

means (26, 36, 40, 44) for facilitating **self-alignment of said shaft (22)** of said turn-button (12) with said aperture (34) of said lock mechanism (14) as said shaft (22) of said turn-button (12) is inserted into said aperture (34) of said lock mechanism (14), said means (26, 36, 40, 44) including a plurality of leading helical surfaces (40) that taper and twist from a transition line (42) of said shaft (22) toward a tip end (44) of said shaft (22). (Page 3, lines 3-15; Figs. 1, 2 and 3). (Emphasis added).

More particularly, the Examiner states that “Appellant has mischaracterized the passage by assuming the passage does not include the helical key blade, the examiner states that the final sentence of the passage explicitly states the alignment of the helical surfaces via the helical key blade.” Appellant takes issue of the allegation of mischaracterization, and the allegation of what the passage explicitly states.

As a first point, nothing in the passage indicates a self-alignment of the key blade portion (230) with the keyway, but rather, the passage merely indicates that first the protrusion 216 at the tip end of shank 210 is “inserted into the positioning slot 114 provided in the center of the front end of the lock core 110 for positioning and facilitating insertion of the key” and then states that, “Each end of the helical key blade is then aligned with the entry of the



keyway”. (Emphasis added). With reference to Liu Figs. 1 and 3 (reproduced above at page 7 of this Reply Brief), it is clear that after a user inserts protrusion 216 at the tip end of shank 210 into the positioning slot 114, the key blade portion 230 are then aligned with the keyways 112, which occurs by the manual rotation of the key blade portion 230 relative to shank 210 (blade portion 230 rotating freely in driver head 220; Liu, column 6, lines 41-45) until the distal ends of key blades 236 are aligned with the keyways 112. Accordingly, in Liu there simply is no self-alignment of key blade portion 230 (or key blades 236) with keyways 112.

Further, “the examiner states the final sentence of the [Liu] passage explicitly states the alignment of the helical surface via the helical key blade.” (Emphasis added). This statement simply is not supported by Liu, as no such explicit statement exists in the passage or anywhere in Liu. As set forth in claim 9, the self-alignment is directed to the self-alignment of the shaft (22) of the turn-button (12) with the aperture (34) of the lock mechanism. In Liu, the key blade portion 230 does nothing with respect to “self-alignment”.

#### **Reply to Examiner’s Answer at Paragraph Bridging Pages 9 and 10**

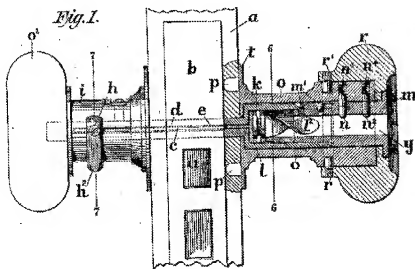
With regard to Appellant’s arguments with respect to claims 11 and 17, the Examiner states in the Examiner’s Answer at page 9, “Appellant misconstrued the rejection, specifically, the Appellant alleges the rejection is made with a combination of the lock assembly of Liu and the door handle of Hurdle, which is incorrect.” To the contrary, and in response, Appellant provides the following quote as stated by the Examiner in the Final Office Action mailed January 21, 2009, at page 4, last sentence, “It would have been obvious to one with ordinary skill in the art at the time the invention was made **to incorporate the locking assembly of Liu into a door knob, as taught by Hurdle, ....**” (Emphasis added). Appellant submits that to incorporate the locking assembly of Liu into a door knob as taught by Hurdle, as asserted by the

Examiner in the Final Office Action, is in fact to make the combination. Thus, clearly the Appellant did not misconstrue the rejection.

Accordingly, Appellant stands by the arguments made in Appellant's Brief, which is that to achieve the invention as recited in claim 11 and/or claim 17 by the combination of Liu in view of Hurdle, significant change in the structure and function of the combined elements of Liu and Hurdle would have been required. Thus, for reasons set forth in the Brief of Appellant, the improved structure provided by the present invention over that of Liu in view of Hurdle is more than the predictable use of the elements of Liu and Hurdle according to their established functions. See *KSR International Co. v. Teleflex Inc.* (KSR), 127 S. Ct. 1727, 82 USPQ2d 1385, 1396 (2007).

**Reply to Examiner's Answer at the First Full Paragraph at Page 10**

The Examiner asserts that, "as alleged by the Appellant, the lock cylinder of Hurdle extends to the outside of the door knob, the examiner states that this assumption is incorrect." This is not an assumption by Appellant, but rather, as is clearly shown in Hurdle Fig. 1 (in partial cross section), which is reproduced below for convenience of the reader, lock cylinder (m) extends to the outside of the door knob (r).



More particularly, the cross-section of Hurdle Fig. 1 clearly depicts a central indentation (non-sectioned) at the right end of the door knob (r), with the lock cylinder (m) extending to the outside of the door knob (r) from an inner annular channel of door knob (r) to make the lock cylinder (m) accessible for key insertion.

Further, while it is well known in the art that a lock cylinder is disposed in a door handle, such knowledge supports Appellant's position. A lock cylinder is configured with a keyway into which the key is removably inserted, and thus does not provide a configuration of "said shaft of said **turn-button** extending from said head portion through said one of said door knob and said door lever to engage said aperture of said lock mechanism." In the case of the lock cylinder, the key is inserted directly into the "aperture" keyway of the lock cylinder without passing through the door knob (r) (see Hurdle Fig. 1).

Thus, even if Liu and Hurdle were combined (although Appellant maintains it would not be obvious to do so), the key 200 of Liu would engage the lock cylinder (m) of Hurdle, and thus the combination would not provide a configuration of "said shaft of **said turn-button** extending from said head portion through said one of said door knob and said door lever to engage said aperture of said lock mechanism," (emphasis added) as recited in Appellant's claims 11 and/or 17.

## **B. CONCLUSION**

For the reasons set forth in the Brief of Appellant and this Reply Brief, Appellant submits that appealed claims 1-6 and 8-20 are patentable in their present form. Appellant

respectfully requests that the Board reverse the final rejections of the appealed claims, and indicate that pending claims 1-6 and 8-20 are patentable in their present form.

Respectfully submitted,

/Ronald K. Aust, Reg. No. 36735/

Ronald K. Aust  
Attorney for Appellant

RKA/ts

Electronically Filed: January 19, 2010

TAYLOR & AUST, P.C.  
12029 E. Washington Street  
Indianapolis, IN 46229  
Telephone: 317-894-0801  
Facsimile: 317-894-0803